

35.C15261



PATENT APPLICATION

#4 036
Box 560

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
TADASHI OKAMOTO ET AL.) : Examiner: Unassigned
Application No.: 09/764,050) : Group Art Unit: Unassigned
Filed: January 19, 2001) :
For: DETECTION/QUANTIFICATION)
OF TARGETED NUCLEOTIDE)
CHAINS, AND DETECTION/)
QUANTIFICATION OF MULTI-)
FOLD NUCLEOTIDE CHAINS)
BY FLUORESCENCE : August 2, 2001

Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to receipt of the first Office Action on the merits, the Examiner is respectfully requested to amend the subject application as follows.

IN THE SPECIFICATION:

Please substitute the TITLE OF THE INVENTION section at page 1, lines 1-4 with the following replacement Title section. A marked-up copy of this section, showing the changes made thereto, is attached.

--DETECTION/QUANTIFICATION OF TARGETED NUCLEOTIDE CHAINS, AND DETECTION/QUANTIFICATION OF MULTI-STRANDED NUCLEOTIDE CHAINS BY FLUORESCENCE--

Please substitute the paragraph starting at page 30, line 24 and ending at page 31, line 4 with the following replacement paragraph. A marked-up copy of this paragraph, showing the changes made thereto, is attached.

--(1) Human β_2 adrenergic receptor mRNA was synthesized from human β_2 adrenergic receptor cDNA using T₇RNA polymerase by conventional procedure and purified after the D Nase treatment. A 10 μm , in terms of the base concentration of the targeted portion, stock solution of a targeted nucleotide chain was prepared by properly mixing the aqueous solution of the above mRNA and water.--

Please substitute the paragraph starting at page 32, line 23 and ending at page 33, line 9, with the following replacement paragraph. A marked-up copy of this paragraph, showing the changes made thereto, is attached.

--(2) 20-mer oligodeoxynucleotide having base sequence complementary to that of the above model targeted nucleotide chain was obtained as a probe nucleotide chain, and a 100 μm , in terms of the base concentration, stock solution of the probe nucleotide chain was prepared in the same manner as described in (1). In order to fix the probe nucleotide chain on a solid-phase substrate by the covalent bond, 20-mer oligodeoxynucleotide was obtained and used at which 5' terminal an amino group was attached using hexamethylene as a linker. The base sequence was as follows:

3'TGACCGGCAGCAAAATGTTG-NH₂5'

(SEQ ID NO. 2)--

Please substitute the paragraph at page 36, lines 4-13 with the following replacement paragraph. A marked-up copy of this paragraph, showing the changes made thereto, is attached.

--(2) 20-mer oligodeoxynucleotide having base sequence complementary to that of the above model targeted nucleotide chain was obtained as a probe nucleotide chain in the same manner as in Example 4, and a 100 μ m, in terms of the base concentration, stock solution of the probe nucleotide chain was prepared in the same manner as described in (1). The base sequence was as follows:

3'TGACCGGCAGCAAAATGTTG-NH₂5'

(SEQ ID NO. 2)--

Please substitute the paragraph at page 37, lines 20-26 with the following replacement paragraph. A marked-up copy of this paragraph, showing the changes made thereto, is attached.

--(1) Human β_2 adrenergic receptor mRNA was synthesized from human β_2 adrenergic receptor cDNA using T₇RNA polymerase by conventional procedure and purified after the D Nase treatment. A 10 μ m stock solution of targeted nucleotide chain was prepared as a base of the targeted portion by properly mixing the aqueous solution of the above mRNA and water.--

Please substitute the paragraph at page 38, lines 4-11 with the following replacement paragraph. A marked-up copy of this paragraph, showing the changes made thereto, is attached.

--(2) Ten μ M aqueous solution of oligodeoxynucleotide (from Kanto Chemical Co., Ltd.) having the following base sequence was prepared as a probe nucleotide chain stock solution. An amino group was attached at the 5' terminal of this oligodeoxynucleotide like Examples 4 and 5.

3'ACGACACGCAGTGCCGGTCGTA-NH₂5

(SEQ ID NO: 4)--

Please substitute the paragraph beginning at page 47, line 26 and ending at page 48, line 3 with the following replacement paragraph. A marked-up copy of this paragraph, showing the changes made thereto, is attached.

--(1) The following synthesized oligodeoxynucleotide, which has human telomere sequence contributing to the formation of quadruple-stranded chains, was purchased (from Kanto Chemical Co., Ltd.).

d(TTGGG)₂--

REMARKS

The specification has been amended to correct minor typographical errors. Clearly, these errors and their corrections are obvious and represent the correction of minor informalities. Entry of the amendment is respectfully requested.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

RoberTaxm

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Appendix



Application No. 09/764,050
Attorney Docket No. 35.C15261

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO SPECIFICATION

The TITLE OF THE INVENTION section at page 1, lines 1-4 has been amended as follows:

--DETECTION/QUANTIFICATION OF TARGETED NUCLEOTIDE CHAINS, AND DETECTION/QUANTIFICATION OF MULTI-[FOLD] STRANDED NUCLEOTIDE CHAINS BY FLUORESCENCE--

The paragraph starting at page 30, line 24 and ending at page 31, line 4 has been amended with the following replacement paragraph.

--(1) Human [β_2] β_2 adrenergic receptor mRNA was synthesized from human [β_2] β_2 adrenergic receptor cDNA using [T7RNA] T₇RNA polymerase by conventional procedure and purified after the DNase treatment. A 10 μ m, in terms of the base concentration of the targeted portion, stock solution of a targeted nucleotide chain was prepared by properly mixing the aqueous solution of the above mRNA and water.--

The paragraph starting at page 32, line 23 and ending at page 33, line 9, has been amended with the following replacement paragraph.

--(2) 20-mer oligodeoxynucleotide having base sequence complementary to that of the above model targeted nucleotide chain was obtained as a probe nucleotide chain, and a 100 μ m, in terms of the base concentration, stock solution of the probe nucleotide chain was prepared in the same manner as described in (1). In order to fix the probe nucleotide chain on a solid-phase substrate by the covalent bond, 20-mer oligodeoxynucleotide was obtained and used at which 5' terminal an amino group was attached using hexamethylene as a linker. The base sequence was as follows:

[3'TGACCGGCAGCAAAATGTTG-NH₂5'] 3'TGACCGGCAGCAAAATGTTG-NH₂5'

(SEQ ID NO. 2)--

The paragraph at page 36, lines 4-13 has been amended with the following replacement paragraph.

--(2) 20-mer oligodeoxynucleotide having base sequence complementary to that of the above model targeted nucleotide chain was obtained as a probe nucleotide chain in the same manner as in Example 4, and a 100 μ m, in terms of the base concentration, stock solution of the probe nucleotide chain was prepared in the same manner as described in (1). The base sequence was as follows:

[3'TGACCGGCAGCAAAATGTTG-NH₂5'] 3'TGACCGGCAGCAAAATGTTG-NH₂5'

(SEQ ID NO. 2)--

The paragraph at page 37, lines 20-26 has been amended with the following replacement paragraph.

--(1) Human [β 2] β_2 adrenergic receptor mRNA was synthesized from human [β 2] β_2 adrenergic receptor cDNA using [T7RNA] T₇RNA polymerase by conventional procedure and purified after the D Nase treatment. A 10 μ m stock solution of targeted nucleotide chain was prepared as a base of the targeted portion by properly mixing the aqueous solution of the above mRNA and water.--

The paragraph at page 38, lines 4-11 has been amended with the following replacement paragraph.

--(2) Ten μ M aqueous solution of oligodeoxynucleotide (from Kanto Chemical Co., Ltd.) having the following base sequence was prepared as a probe nucleotide chain stock solution. An amino group was attached at the 5' terminal of this oligodeoxynucleotide like Examples 4 and 5.

[3'ACGACACGCAGTGCCGGTCGA-NH25'] 3'ACGACACGCAGTGCCGGTCGA-
NH₂5'

(SEQ ID NO: 4)--

The paragraph at page 47, line 26 and ending at page 48, line 3 has been amended with the following replacement paragraph.

--(1) The following synthesized oligodeoxynucleotide, which has human telomere sequence contributing to the formation of quadruple-stranded chains, [were] was purchased (from Kanto Chemical Co., Ltd.).

[d(TTGGG)2] d(TTGGG)₂--

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